

IN THE CLAIMS

1 (Currently Amended). A method comprising:
coupling said surface blow out preventer to a wellhead using casing;
providing a remotely operable subsurface latch to sever the connection between said
wellhead and said surface blow out preventer; and
producing hydrocarbons from a subsea well in an underbalanced condition using a
rotating head mounted on ~~a~~ the surface blow out preventer.

2 (Original). The method of claim 1 including using the surface blow out preventer to
provide surface flow control.

3 (Original). The method of claim 2 including providing a subsurface blow out preventer
in addition to said surface blow out preventer.

4 (Original). The method of claim 3 including providing subsurface shear blow out
preventers.

Claim 5 (Canceled).

6 (Currently Amended). The method of claim 1 ~~5~~ including tensioning said casing.

7 (Currently Amended). The method of claim 1 ~~5~~ including providing a flow of mud
through a casing to a drill bit.

8 (Original). The method of claim 7 including lowering the density of mud returning
from said drill bit through said casing.

9 (Original). The method of claim 8 including providing a separate line to enable fluid to
be pumped from the surface to a subsurface location to lower the density of the returning mud.

10 (Original). The method of claim 9 including providing a tensioned line to provide said fluid from said surface.

11 (Original). The method of claim 10 including providing a disconnectable latch to disconnect the line from the wellhead.

12 (Original). The method of claim 11 including providing a subsurface blow out preventer and providing said line to said subsurface blow out preventer.

13 (Original). The method of claim 12 including providing a pair of shear ram subsurface blow out preventers and pumping said fluid between said shear blow out preventers.

14 (Original). The method of claim 13 including providing a remotely operable valve to control the flow of said fluid and positioning said valve at a subsea location.

15 (Original). The method of claim 1 including providing a rotating head that transfers rotational energy to said drill string through a packer.

16 (Original). The method of claim 15 including providing said rotational energy through a resilient packer.

17 (Original). A drilling rig comprising:
a rotating head;
a surface blow out preventer mounted under said rotating head on said rig; and
an apparatus to pump fluid to a subsea location to lower the density of drilling mud returning to said rig.

18 (Original). The rig of claim 17 including a casing coupled from said surface blow out preventer to a subsea subsurface blow out preventer.

19 (Original). The rig of claim 18 wherein said subsea blow out preventer includes a pair of shear blow out preventers.

20 (Original). The rig of claim 19 including a remotely operable latch to sever said casing from said subsea blow out preventer.

21 (Original). The rig of claim 20 wherein said casing is tensioned.

22 (Original). The rig of claim 17 including a separate line to supply lower density fluid to a subsea location to lower the density of drilling mud to be returned to said rig.

23 (Original). The rig of claim 22 wherein said line is tensioned.

24 (Original). The rig of claim 23 wherein a disconnectable latch is provided to disconnect the line at a subsea location.

25 (Original). The rig of claim 17 including a subsurface blow out preventer and a coupling to receive said line.

26 (Original). The rig of claim 25 wherein said subsurface blow out preventer includes a pair of shear ram subsurface blow out preventers and said coupling is arranged between said pair of shear ram subsurface blow out preventers.

27 (Original). The rig of claim 26 including a valve in said line to control the flow of fluid to lower the density of said drilling mud.

28 (Original). The rig of claim 17 wherein said rotating head includes a resilient packer and a drill string and tubing, said resilient packer to seal the region between said drill string and said tubing and to transfer rotational energy from said tubing to said drill string.

29 (Original). The subsea shutoff assembly comprising:
a pair of shear blow out preventers; and
a device coupling said blow out preventers, said device having an inlet to receive a density lowering fluid to lower the density of drilling mud moving upwardly through said device.

30 (Original). The assembly of claim 29 including a line for supplying density lowering fluid, said line including a remotely actuatable valve.

31 (Original). The assembly of claim 30 wherein said valve automatically closes upon loss of control.

32 (Original). A method comprising:
operating a subsea wellhead in an underbalanced condition;
providing mud at a first density to said wellhead; and
injecting, from the sea surface, a first density lowering fluid, into mud returning from said wellhead, through tensioned, latched tubing.

33 (Original). The method of claim 32 including producing hydrocarbons from a subsea well in an underbalanced condition using a rotating head mounted on a surface blow out preventer.

34 (Original). The method of claim 33 including using the surface blow out preventer to provide surface flow control.

35 (Original). The method of claim 34 including providing a subsurface blow out preventer in addition to said surface blow out preventer.

36 (Original). The method of claim 35 including providing subsurface shear blow out preventers.

37 (Original). The method of claim 32 including providing a separate line for said first density lowering fluid to be pumped from the surface to a subsurface location mud.

38 (Original). The method of claim 37 including providing a subsurface blow out preventer and providing said line to said subsurface blow out preventer.

39 (Original). The method of claim 38 including providing a pair of shear ram subsurface blow out preventers and injecting said first density lowering fluid between said shear blow out preventers.

40 (Original). The method of claim 39 including providing a remotely operable valve to control the flow of said fluid and positioning said valve at a subsea location.

41 (Original). The method of claim 33 including providing a rotating head that transfers rotational energy to said drill string through a packer.

42 (Original). The method of claim 41 including providing said rotational energy through a resilient packer.

43 (Original). A system for supplying density lowering fluid to a subsea location comprising:

a surface hanger to tension and hang tubing connectable to a source of density lowering fluid; and

a subsea latch to couple a first portion of said tubing to a second portion of said tubing, said latch being remotely operable to disconnect said first portion of said tubing from said second portion of said tubing.

44 (Original). The system of claim 43 including a subsea valve to control the rate of flow of fluid through said tubing.

45 (Original). The system of claim 44 wherein said valve is coupled to a connector to couple said tubing to a subsea location.

46 (Original). The system of claim 43 including a subsea shutoff assembly coupled to said tubing.

47 (Original). The system of claim 46 wherein said subsea shutoff assembly includes a pair of shear ram blow out preventers coupled to one another.

48 (Original). The system of claim 47 including a coupling to connect said shear ram blow out preventers to one another, said coupling adapted to receive said tubing, said coupling to pass drilling fluid downwardly through a central passage and upwardly through a radially displaced passage.

49 (Original). The system of claim 43 wherein said latch disconnects upon detection of a failure.

50 (Original). The system of claim 43 wherein said hanger includes a hydraulic ram to grip said tubing.

51 (New). A method comprising:
providing a rotating head that transfers rotational energy to said drill string through a packer; and
producing hydrocarbons from a subsea well in an underbalanced condition using the rotating head mounted on the surface blow out preventer.

52 (New). The method of claim 51 including providing said rotational energy through a resilient packer.